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ABSTRACT

The National Preventive Dentistry Demonstration Program was conducted to assess the costs and benefits of combinations of school-based preventive dental care procedures. The program involved almost 30,000 elementary school children from 10 sites across the country. Classroom procedures, such as weekly fluoride mouthrinse, were administered or supervised by classroom teachers. Clinic procedures were provided by a team of dental hygienists under the direction of a dentist. This care involved the applications of a plastic-like coating called sealants, cleaning the teeth with a fluoride paste, and providing a fluoride gel treatment. This report describes the results of teacher and principal surveys conducted during the first, second, and fourth year of field activities. The surveys provide information about how the program was implemented as well as teacher and principal attitudes toward the program as a whole and its various components. The survey results also provide information about possible variations among sites in how the program was conducted. (JD)

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TEACHER AND PRINCIPAL SURVEY RESULTS IN THE NATIONAL PREVENTIVE DENTISTRY DEMONSTRATION PROGRAM

Stephen P. Klein, Frank Leone, John N. Grabowski, Stephanie Knapik, Judith A. Disney

June 1984

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The Robert Wood Johnson Foundation

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PREFACE

The National Preventive Dentistry Demonstration Program was conducted to assess the costs and benefits of various types and combinations of school-based preventive dental care procedures. The Program was supported by two grants from The Robert Wood Johnson Foundation of Princeton, New Jersey. One of these grants was to the American Fund for Dental Health (AFDH), a national nonprofit organization dedicated to the support of dental education, service, and research. The other grant was to The Rand Corporation, a nonprofit public institution that conducts policy research and analysis on problems of national security and domestic affairs.

The initial concept for the Program was developed and presented to The Robert Wood Johnson Foundation by AFDH. Within the Program, AFDH was responsible for providing and supervising the preventive care, collecting the data, and conducting the annual dental examinations. Rand was responsible for monitoring these activities, developing the data collection forms and procedures, providing computer support for Program activities, and conducting the data analyses. AFDH and Rand worked together in designing the Program, selecting the sites, preparing reports, and establishing the procedures for other areas of joint responsibility.

The Program involved almost 30,000 children from ten sites across the United States. Most of these children received one or more types of preventive dental care procedures over a four year period.

This report describes the results of teacher and principal surveys conducted during the first, second, and fourth year of field activities. These surveys provided information about how the Program was implemented as well as teacher and principal attitudes toward the Program as a whole and its various components. This information is intended for educators, dental researchers, and health planners who are interested in similar types of school-based programs. The survey results also provide information about possible variations among sites in how the Program was conducted.

Other reports on the Program describe its procedures (Klein & Bohannan, 1979), its baseline results (Bell et al., 1982), the reliability of its dental examiners (Klein et al., 1984), the effectiveness of its treatment procedures (Bell et al., 1984), and the cost of providing these procedures (Foch et al., 1984).

SUMMARY

The National Preventive Dentistry Demonstration Program was conducted to assess the costs and benefits of various types and combinations of school-based preventive dental care procedures. The Program involved almost 30,000 children from ten sites across the country. Most of these children received one or more types of preventive dental care for as many as four years. The children receiving care were in grades 1, 2, or 5 when the Program began at their school.

Two general types of care were provided, classroom and clinic. The classroom procedures, such as a weekly fluoride mouthrinse, were administered or supervised by classroom teachers. The clinic procedures were provided by a team of dental hygienists and assistants under the direction of a dentist. This care involved the application of a plastic like coating, called sealants, to the chewing surfaces of the posterior teeth, cleaning the teeth with a fluoride paste, and providing a fluoride gel treatment.

One aspect of the Program involved conducting a mailed questionnaire survey of the teachers and principals that participated in it. These surveys were designed to provide information about how the Program was implemented as well as the attitudes of school personnel toward its various components. The questionnaires were mailed and returned during the spring of the first, second, and fourth year of Program operation. About 75 percent of the teachers and 90 percent of the principals returned usable questionnaires each year. A few sites had much higher teacher response rates than others.

The major findings regarding the Program's implementation were:

- About 95 percent of the teachers said they followed the Program's protocol for administering the tooth brushing, fluoride mouthrinse, and flouride tablet components. Most teachers said they gave the dental health lessons in the manner suggested by the Program's staff, but many teachers said they

integrated these lessons (or their materials) with other instructional programs.

- The lower the grade level, the more time it took to administer the brushing and mouthrinse components. This relationship accounted for nearly all of the differences in average time per component across Program years. Neither experience with the Program nor administering several versus just a few components within a classroom had any affect on the time taken per component.
- Average reported administration times were: 8 to 15 minutes per session (16 to 30 minutes per week) for brushing, 6 to 11 minutes per week for mouthrinse, and 4 to 5 minutes per session (20 to 25 minutes per week) for tablets.
- There was considerable variation among sites in the time taken to administer each component. The sites that took longer to administer one component also tended to take longer to administer the other components. These differences tended to persist across Program years.
- The two most common complaints by both teachers and principals about the Program were the amount of classroom time taken and the inconveniences it caused. Third on the list was recordkeeping for teachers and space and facilities for principals.
- There were no consistent relationships between treatment regimen and the numbers or types of complaints made by either teachers or principals. The one exception to this trend was that Regimen #3 (clinic only) teachers reported fewer problems than did the teachers in the other regimens.

The major findings regarding attitudes toward the Program were:

- Most of the teachers and principals who returned questionnaires had positive to very positive attitudes about the Program. This finding held up across sites, Program years, and treatment regimens.

- Principals tended to have more positive attitudes about the Program than did teachers, especially toward the end of the Program and at certain sites.
- Teachers in the lower grade levels tended to have more positive attitudes about the Program than teachers at the upper grade levels. This trend accounted for almost all of the between year differences in average attitude scores.
- There were significant differences in average attitude scores among sites. These differences held up across Program years.
- Year 4 teachers who participated in the Program previously had slightly more positive attitudes about it than teachers that had not had any Program experience. However, the amount of experience with the Program was not related to Year 2 attitudes or to the number of problems reported by teachers in either Year 2 or Year 4.
- Slightly more than 50 percent of the teachers said they would like to see the Program continued if funds were available for this purpose. There was generally more interest in continuing the dental health lessons in Year 2 than in Year 4; the reverse was true for the clinic component.
- Most of the teachers felt that their students were moderately receptive to the various components. In general, the lower the grade level, the higher the degree of receptivity.

The foregoing findings suggest that site and grade level had a far more important role than treatment regimen in determining how the Program was implemented and in affecting teacher and principal attitudes toward it.

ACKNOWLEDGMENTS

The surveys described in this report were carried out with the assistance of the staff at each of the Program's ten sites. This staff prepared address lists, followed up on nonrespondents, reviewed drafts of the questionnaires and cover letters, and participated in various other aspects of the survey procedures. The authors also appreciated the time and effort devoted by the teachers and principals who completed the questionnaires.

Rand colleagues Robert Bell, Sally Carson, and Eanswythe Leicester assisted in conducting the statistical analyses of the data. Marcia Lewis helped in preparing the returned questionnaires for data processing.

Kathleen Lohr reviewed a previous draft of this report and provided us with many helpful suggestions for its improvement.

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I. INTRODUCTION

PROGRAM DESCRIPTION

The National Preventive Dentistry Demonstration Program was conducted to assess the costs and effects of various types and combinations of school-based preventive dental care procedures. The Program involved two sites in each of five regions of the country. Within a region, one site had a low fluoride water supply and the other had a fluoride level that was optimal for its geographic area (see Table 1.1). The ten sites also varied with respect to several other factors, such as minority enrollment and degree of urbanization. A more complete description of the sites and how they were selected appears in Klein and Bohannan, 1979.

Two general categories of preventive dental care were provided, classroom and clinic. Classroom components, such as tooth brushing, were supervised or administered by classroom teachers or aides. Clinic components were provided by a team of dental hygienists and assistants under the direction of a dentist. This team traveled from school to school within a community. They also delivered supplies for the classroom components, helped teachers implement the components, and,

Table 1.1

SITES PARTICIPATING IN THE NATIONAL PREVENTIVE DENTISTRY DEMONSTRATION PROGRAM

Region	Nonfluoridated Sites	Fluoridated Sites
Northeast	Billerica, Massachusetts	New York, New York
Southeast	Tallahassee, Florida	Chattanooga, Tennessee
Central	Wichita, Kansas	Minneapolis, Minnesota
Southwest	Monroe, Louisiana	El Paso, Texas
Northwest	Pierce County, Washington	Hayward, California

through periodic classroom visits, identified and counseled teachers who were not adhering to the Program's protocols.

Table 1.2 lists the preventive procedures that were provided and Table 1.3 shows how they were organized into treatment regimens. Within each site, schools rather than individual children were assigned randomly to regimens because certain procedures, such as mouthrinsing, were more efficiently delivered when children were in classroom groups.

Children who were in grades 1, 2, and 5 in the fall of 1977 were eligible to receive all the preventive care procedures provided by the Program at their school. Children who matriculated into a school after the Program began were eligible to receive that school's classroom components, but they were not eligible to receive any of its clinic components.

After the first year of Program operation, a few schools offered two and sometimes three regimens. This was done for several reasons, such as a school district closing one Program school and moving the children to one or more other schools.

About 20,000 children from over 100 schools received one or more types of preventive care through the Program. Most of these children received this care for four years. Participation rates and examination data are presented in other reports (Foch et al., 1981; Bell et al., 1982; Bohannan et al., 1984; Klein et al., 1984).

Table 1.4 shows the grade levels participating in the Program during each school year. Classroom care was not provided after the 6th grade because of the difficulties associated with delivering it (and student acceptance of it) at junior high schools. The pattern depicted in Table 1.4 applied to all sites except New York. The New York site was discontinued after the third year primarily because it was especially expensive to operate, and one of its treatment groups had to be dropped because most of its students participated in another dental program.

Table 1.2

DESCRIPTION OF TREATMENT COMPONENTS

Treatment Component	Procedure and Rationale	Frequency of Treatment	Personnel Required
Fluoride paste prophylaxis	An acidulated phosphate fluoride (APF) paste is used in a professional cleaning of the child's teeth. This 30-minute procedure provides topical fluoride protection and prepares tooth surfaces for the acidulated phosphate fluoride gel treatment.	Twice per year.	Auxiliary personnel consistent with minimum state dental practice legislation.
Acidulated phosphate fluoride gel	Application of 1.23% fluoride ion gel in a foam tray. This tray is kept in the mouth for a period of 4 minutes. Both arches are treated at the same sitting. The gel treatment is applied immediately after the prophylaxis and provides topical protection to all tooth surfaces.	Twice per year in conjunction with the prophylaxis.	Auxiliary personnel consistent with minimum state dental practice legislation.
Sealant	A sealant is a plastic-like resin that adheres to the teeth. This transparent coating (Delton) is applied in about 30 minutes to the occlusal surfaces of posterior teeth of both arches that are not already carious or filled. The sealant provides topical protection to the surfaces treated.	After initial application, sealants are checked every 3 months.[a] If a sealant is lost, it is reapplied a maximum of 3 times.	Dental or auxiliary personnel consistent with minimum state dental practice legislation.
Systemic fluoride tablet	One mg of fluoride in 2.2 mg of neutral sodium fluoride tablet is chewed and swished for one minute and then swallowed. This procedure provides both systemic and topical fluoride protection.	One tablet per day during the school year.	Classroom teacher or aide.
Fluoride mouthrinse	A 0.2% neutral sodium fluoride solution is served to the child in a paper cup. The child swishes the solution between the teeth for 60 seconds and then expectorates into the cup. The child does not swallow the solution. This procedure provides topical fluoride protection.	Once per week for each week of the school year.	The classroom teacher or aide supervises the administration of the mouthrinse.
Plaque control	Children in all grades brush in school without a dentifrice. Children in grades 5 and 6 also use dental floss. These procedures are designed to remove plaque (and thereby the bacteria) that causes tooth decay and gingivitis. A supply of ADA-approved fluoride dentifrice is provided for home use (3 to 4 times per year).	Twice weekly supervised exercises in the classroom. Disclosing solution is used at least once per month.	Dental auxiliary demonstrates appropriate procedures and periodically visits classrooms to ensure that they are being followed. Teacher or aide provides routine supervision of classroom activities.
Education program	This program consists of a series of 10 units (about 50 minutes each) that were selected for the program from existing materials designed to promote appropriate oral hygiene and health. Different materials were prepared for each grade level.	Classroom teacher decides whether to teach as a unit or spread over school year.	Classroom teacher after orientation by program education coordinator.
Diet regulation	This component consists of efforts to reduce the frequency of refined carbohydrates in school food programs and to encourage the elimination of cariogenic snacks.	Every school day throughout the year.	Education coordinator working with school dietician, administrators, parents, and children.

[a] After the second school year, the interval between sealant checks was increased to six months.

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Table 1.3

ORGANIZATION OF TREATMENT COMPONENTS INTO REGIMENS RELATIVE TO SITE FLUORIDATION LEVEL

Regimen Type	Nonfluoridated Sites[a]		Fluoridated Sites	
	Clinic	Classroom	Clinic	Classroom
1 Comprehensive	Examination Prophy/Gel Sealants	Mouthrinse Plaque Control Education-Diet Tablets	Examination Prophy/Gel Sealants	Mouthrinse Plaque Control Education-Diet
2 Modified Comprehensive	Examination Prophy/Gel	Mouthrinse Plaque Control Education-Diet Tablets	Examination Sealants	Mouthrinse Plaque Control Education-Diet
3 Clinic Care Only	Examination Prophy/Gel Sealants		Examination Prophy/Gel Sealants	
4 Classroom Care Only	Examination	Mouthrinse Plaque Control Education-Diet Tablets	Examination	Mouthrinse Plaque Control Education-Diet
5 Modified Classroom	Examination	Plaque Control Education-Diet	Examination	Plaque Control Education-Diet
6 Longitudinal Comparison	Examination		Examination	

[a]The only differences between nonfluoridated and fluoridated sites were that tablets were included in Regimens 1, 2, and 4 in nonfluoridated sites, and Regimen 2 included prophy/gel application at nonfluoridated but sealants at fluoridated sites.

Table 1.4

GRADE LEVELS RECEIVING EACH TYPE OF CARE DURING EACH SCHOOL YEAR

Type of care	Year 1 1977-78	Year 2 1978-79	Year 3 1979-80	Year 4 1980-81
Classroom	1, 2, 5	2, 3, 6	3, 4	4, 5
Clinic	1, 2, 5	2, 3, 6	3, 4, 7	4, 5, 8

PURPOSES

Observed differences in the relative effectiveness of the treatment regimens could be affected by several factors that are not related to the inherent efficacy of these regimens. For instance, the children in one regimen may have been generally more susceptible to tooth decay than those in another regimen even before the Program began. Many potential biases of this type can be handled by statistically adjusting for the background characteristics of the children receiving each regimen (Klein and Bell, 1981). However, statistical analyses do not indicate whether observed differences in decay were affected by possible variations in how the regimens were administered.

It was necessary to gather data about such variation to determine whether treatment effects may have been biased by some children not receiving their prescribed protocol. This was done in three ways: records review, site visits, and surveys. Records review consisted of monthly monitoring of the number of children receiving each type of clinic care at each site. This identified deviations from the planned schedule for delivering this care. Sites were notified of such deviations and, where appropriate, action was taken to restore the schedule.

The American Fund for Dental Health and Rand conducted both independent and joint site visits. The visitors reviewed how the Program was being conducted and, where necessary, recommended changes to insure compliance with each regimen's protocol. The site visits included interviews with teachers and principals to identify problems created by the Program and to obtain suggestions for improving it.

One major limitation of the records review was that it emphasized clinic procedures. It provided little information about whether teachers were complying with the protocols for the classroom components. The site visit approach also was limited in that only a few classrooms could be observed at each site on any given visit. Further, the classrooms that were visited were often selected by the local site staff in order to reduce disruptions to normal school activities.

The foregoing considerations led to the decision to collect additional information about Program implementation by means of a mail questionnaire survey of all teachers and principals. This survey inquired about what procedures were actually used in the classrooms, when they were given, and what problems were encountered in delivering or supervising them. The survey also provided an opportunity to assess the teachers' and principals' attitudes toward the Program and its components. Information about these attitudes will help in assessing the feasibility of maintaining a school-based program. For instance, did any initial enthusiasm for the Program disappear after the teachers had to administer it for several years, or did their acceptance of it increase after they became familiar with it?

In summary, the major questions addressed by the surveys were: (1) Was the Program implemented as planned? and (2) What were the teachers' and principals' attitudes toward it?

The remainder of this section describes the procedures that were used to conduct the surveys and each survey's response rates. Sections II and III discuss the survey results with respect to the two questions above.

PROCEDURES

Questionnaires were sent to all the Program's teachers and principals in April of school years 1, 2, and 4. Nonrespondents were mailed a followup letter and another copy of the questionnaire three weeks after the initial distribution. In late May, the site coordinators were sent the names of the principals and teachers at their sites who still had not responded. The coordinators were asked to remind these nonrespondents to return the questionnaire. Respondents returned their questionnaires directly to Rand.

The only exceptions to the foregoing policies were that questionnaires were not sent to:

- Regimen 6 (control group) teachers and principals after Year 1 because questions about preventive procedures only reminded them that their children were not receiving any of these procedures.
- Grade 8 teachers and principals in Year 4 because their students were no longer receiving any of the classroom procedures (see Table 1.4).

Each questionnaire contained a label that identified the respondent's name, site, and school. This information along with grade level (in the case of teachers) and regimen assignments were used in identifying the regimen(s) that were supposed to be provided at the respondent's school.

Some changes were made in the cover letters and questionnaires each year. These changes stemmed from comments made by site staff, respondents, and the teachers and principals interviewed during the site visits. The cover letters and questionnaires used in surveying the teachers each year appear in Appendix A. Appendix B contains the corresponding materials for the surveys of principals.

RESPONSE RATES

About 75 percent of the teachers and 93 percent of the principals returned usable questionnaires (see Table 1.5). Another 5 to 10 percent of the teachers returned questionnaires that were not usable because too few questions were answered or necessary identification data on their questionnaires had been omitted, removed, or destroyed. Only a few of the principal questionnaires were unusable. Site staff were particularly helpful in encouraging teachers and principals to return questionnaires.

The slightly lower return rate for teachers in Year 1 was due primarily to a lower than normal return rate among teachers in Regimen #6 (control group) schools. In Years 2 and 4, when questionnaires were

Table 1.5

NUMBER AND PERCENTAGE OF PRINCIPALS AND TEACHERS RETURNING USABLE QUESTIONNAIRES BY YEAR

		Teachers[a]		Principals	
Year	Grades	Number	Percent	Number	Percent
1	1, 2, 5	706	70	112	93
2	2, 3, 6	644	78	103	89
4	4, 5	404	78	94	96

[a]Regimen #6 teachers were not surveyed after Year 1 and Grade 8 teachers were not surveyed in Year 4.

sent to teachers in Regimens #1 through #5 only, there was no relationship between regimen and response rate.

Table 1.6 shows that Wichita and Pierce County had consistently higher than average teacher return rates, whereas Monroe's return rate was consistently below average. Except as otherwise noted, the across

Table 1.6

PERCENTAGE OF TEACHERS AND PRINCIPALS SURVEYED WHO RETURNED USABLE QUESTIONNAIRES AT EACH SITE EACH YEAR

	Teachers				Principals			
Site	Yr 1	Yr 2	Yr 4	Mean	Yr 1	Yr 2	Yr 4	Mean
Chattanooga	65	73	88	75	100	100	100	100
Billerica	68	73	89	77	88	67	100	85
New York	63	72	--	68	100	63	--	82
Minneapolis	81	81	65	76	86	90	82	86
Wichita	76	90	88	85	100	94	95	96
Pierce County	79	87	89	85	100	100	100	100
Hayward	72	83	67	74	93	92	100	95
El Paso	70	73	83	75	100	100	100	100
Monroe	55	63	63	60	75	80	100	92
Tallahassee	70	75	70	72	88	91	100	93
Average	70	78	78	75	93	89	96	93

site averages presented in this report are the means of the site averages because some sites had more teachers (or more teachers returning questionnaires) than other sites. Individual sites are listed in the order in which they were phased into the Program.

II. PROGRAM IMPLEMENTATION

METHODS OF PRESENTING DENTAL HEALTH LESSONS

The phased schedule of site activation played a major role in how the dental health lessons were administered in Year 1. For instance, teachers at sites that were phased into the Program in the fall of 1977 were more able to spread the lessons out over the 1977-78 school year than were teachers at the sites not activated until the early part of 1978. Early starting sites also tended to have more time for teacher in-service training.

The first year's experiences with the dental health materials led to several changes, such as greater standardization and "packaging" of the lessons. The Program was resumed in the early fall of 1978 at all sites. Thus, the phased schedule only affected the first year's results.

Tables 2.1 and 2.2 provide summary information regarding how the dental health lessons were administered in school Years 2 and 4. Appendix C presents the corresponding data by site. The 8th grade teachers were not surveyed in Year 4 because all classroom procedures were discontinued after the 6th grade (see Table 1.4).

Tables 2.1 and 2.2 indicate that most teachers reported they followed the protocol of giving each lesson by itself and they spread the lessons out over the school year. The high compliance rate on this and other classroom components was attributable in part to the site staff who periodically visited classrooms to distribute supplies, check that supplies were being consumed at the expected rate, and otherwise make sure that the components were being implemented as planned.

ADHERENCE TO PROTOCOL

So as not to bias responses, the Year 1 and 2 questionnaires asked teachers on what days of the week they administered the brushing, mouthrinse, and tablet components (rather than whether they followed the protocols for these components). Less than 5 percent of the teachers said they gave components that the Program did not provide at their school.

Table 2.1

PERCENTAGE OF TEACHERS USING EACH METHOD TO PRESENT DENTAL HEALTH LESSONS

Method	Year 2	Year 4
Each lesson given by itself in one or more classroom periods	68	55
Lessons or materials combined with another instructional program	11	22
Lessons not presented, but materials used to supplement regular health curriculum	8	13
Lessons and/or materials used in other ways	5	1
Did not use the lessons or materials	6	7
No response	2	1

Table 2.2

PERCENTAGE OF TEACHERS USING EACH SCHEDULE FOR PRESENTING DENTAL HEALTH LESSONS[a]

Year	All Given Within a Few Weeks	All Given Within a Few Months	Spread Out over the School Year	Did Not Use Them	No Answer
2	13	21	56	6	4
4	21	14	56	7	1

[a]Responses were tallied for teachers in Regimens 1, 2, 4, and 5. Year 4 questionnaires were not sent to New York teachers or to teachers of grade 8 children.

Table 2.3 shows that almost all teachers knew the protocols, although the data presented in Sec. IV suggests that they may not have always followed them. Many Pierce County teachers said they had the children brush five rather than two times per week (see Appendix D). It is highly unlikely this deviation affected results because the brushing component did not involve the use of a fluoride dentifrice. The data regarding a particular component in Table 2.3 and in all subsequent tables in this report are based on just those teachers who had that component at their school. For example, the data for the tablet component were derived from the five nonfluoridated sites that gave tablets in regimens 1, 2, and 4.

TIME TAKEN TO ADMINISTER EACH COMPONENT

Teachers also were asked how much time it normally took to administer each component. The results in Table 2.4 indicate that there was a systematic drop in time taken to deliver the brushing and mouthrinse components with grade level. Almost all of the difference in time required over years was due to grade level rather than experience with the procedures; e.g., 4th and 5th graders in Year 4 took about as much time as 5th graders in Year 1.

Table 2.3

PERCENTAGE OF TEACHERS REPORTING THAT THEIR STUDENTS RECEIVED EACH PROCEDURE ACCORDING TO PROTOCOL

Component	Year	As per Protocol	Other than Protocol	Not Given
Brushing	1	93	5	2
(2x/week)	2	97	2	1
Mouthrinse	1	92	5	3
(1x/week)	2	98	0	2
Tablets	1	96	4	0
(5x/week)	2	92	6	2

Table 2.4

AVERAGE NUMBER OF MINUTES TAKEN PER SESSION
TO ADMINISTER EACH COMPONENT BY GRADE LEVEL AND YEAR

Component	Sessions per Week	Year 1 Grd. 1+2	Year 2 Grd. 2+3	Year 4 Grd. 4+5	Year 1 Grd. 5	Year 2 Grd. 6
Brushing	2	15.0	14.6	11.1	10.9	8.3
Mouthrinse	1	10.8	9.3	8.3	7.5	6.4
Tablets	5	3.8	4.8	4.3	3.2	3.8

There were large and systematic differences among sites across years for the brushing and mouthrinse components but not for the tablet component (see Table 2.5). For example, Pierce County had an average of 7 minutes per session for brushing and Monroe's mean was 18 minutes (36 minutes per week). The sites that took longer to do one component also tended to take longer to do the other components. There was no consistent relationship between regimen and the time taken to administer a component.

Table 2.5

AVERAGE NUMBER OF MINUTES TAKEN PER SESSION
TO ADMINISTER EACH COMPONENT BY SITE AND YEAR

	Brushing			Mouthrinse			Tablets		
Site	Yr 1	Yr 2	Yr 4	Yr 1	Yr 2	Yr 4	Yr 1	Yr 2	Yr 4
Chattanooga	13.5	15.5	11.4	5.4	7.0	6.5			
Billerica	16.3	11.5	11.6	12.8	7.7	9.5	3.6	4.1	5.1
New York	18.5	15.6	(a)	13.0	7.7	(a)			
Minneapolis	9.8	9.4	8.7	7.7	6.5	6.5			
Wichita	17.0	15.3	12.6	8.6	8.9	8.4	3.7	4.8	4.2
Pierce County	6.7	7.7	5.8	8.1	7.6	6.0	2.1	3.4	3.1
Hayward	11.2	13.1	10.5	11.4	12.8	9.9			
El Paso	16.0	14.7	13.8	10.5	11.6	11.5			
Monroe	22.3	17.2	14.1	15.5	10.7	9.8	5.3	6.4	5.6
Tallahassee	12.3	11.6	11.3	7.6	5.4	7.0	3.6	4.5	3.4
Average	14.4	13.2	11.1	10.1	8.6	8.3	3.7	4.6	4.3

[a]The New York site did not participate in the Program in Year 4.

PROBLEMS ENCOUNTERED

When teachers and principals were asked whether the Program caused any problems, the two most common complaints were "amount of classroom time required" and "inconveniences," such as handling supplies and interruptions to normal school routine (see Table 2.6 and Appendix E). Questions about these factors were added to the Years 2 and 4 questionnaires as a result of comments made to staff during site visits and write-in responses on the Year 1 questionnaire. Section III discusses the relationship between the number of problems reported and teacher attitudes toward the Program.

The data in Table 2.7 show there was generally no consistent relationship between treatment regimen and the prevalence of various types of complaints. The one major exception to this trend was that Regimen #3 (clinic only) tended to have fewer complaints than the other regimens. Regimen #3 also was the only regimen in which teachers did not provide or supervise any of the procedures (although their classrooms might have been disrupted by children coming and going to the clinic).

Table 2.6

PERCENTAGE OF TEACHERS AND PRINCIPALS REPORTING THE MOST COMMON PROBLEMS EACH YEAR

	Teachers			Principals	
Problem Type	Year 1	Year 2	Year 4	Year 1	Year 4
Classroom Time	NA	32	45	NA	34
Inconveniences	NA	24	28	NA	21
Recordkeeping	15	22	17	9	9
Facilities	14	12	9	23	18
Brushing	15	15	14	10	15

NA = Not asked on the Year 1 questionnaire

Table 2.7

PERCENTAGE OF TEACHERS AND PRINCIPALS WITHIN EACH REGIMEN WHO REPORTED CLASSROOM TIME, INCONVENIENCES, AND RECORDKEEPING AS PROBLEMS

	Classroom Time[a]			Inconveniences[a]			Recordkeeping			
	Teachers		Principals	Teachers		Principals	Teachers			Principals
Regimen	Yr 2	Yr 4	Yr 4	Yr 2	Yr 4	Yr 4	Yr 1	Yr 2	Yr 4	Yr 4
1	39	36	50	37	28	25	13	32	16	12
2	33	57	38	18	34	24	18	29	20	5
3	19	24	10	15	8	21	11	4	4	10
4	39	58	65	30	33	35	25	26	15	18
5	25	50	37	17	27	12	13	21	21	6
Average	31	45	40	23	26	23	16	22	15	10

[a]Classroom time and inconveniences were not included on the teachers' Year 1 questionnaire. All three problems were not included on the principals' Year 1 and 2 questionnaires.

The amount of recordkeeping required of school personnel by the Program was slight, especially in Year 1, and almost nonexistent every year in Regimen #3 (clinic only). The recordkeeping in Regimens 1, 2, 4, and 5 in Years 2 and 4 consisted of noting the date each educational lesson was given and in some classrooms marking a list to indicate which children participated in the classroom components each day they were offered. A student was usually responsible for maintaining this roster. Teacher complaints about recordkeeping were there e probably unrelated to specific Program activities.

The percentages in the last row of Table 2.7 are the average of the regimen means whereas the percentages in Table 2.6 are the averages of the site means. The two sets of averages differ slightly because the proportion of respondents in each regimen was not consistent across sites.

The only major difference in the pattern of complaints among grade levels occurred in Year 2 where 3 percent of the grade 2 teachers, 12 percent of the grade 3 teachers, and 28 percent of the grade 6 teachers said they had a problem with the receptiveness of the children to the classroom components (see Appendix E).

III. ATTITUDES TOWARD THE PROGRAM

Three questions were used to assess attitudes toward the Program as a whole and various aspects of it. These questions were:

- What effect has the Program had on normal school activities?
- If funds were available, would you like to see the Program continued?
- How receptive were the children to each component?

PROGRAM'S EFFECT ON NORMAL SCHOOL ACTIVITIES

Respondents marked their answers to the first question, What effect has the Program had on normal school activities, on a five point scale from 1 = very positive to 5 = very negative. Grade 8 teachers were not included in the Year 4 survey because children that began the Program in grade 5 (and therefore would have been in 8th grade in Year 4) did not receive classroom care after the 6th grade. The general results with this question are presented in Tables 3.1, 3.2, and 3.3. These data indicate that:

- The average rating was positive in all sites, cohorts, and regimens. Less than 10 percent of the teachers or principals in any year gave it a "very negative" rating.
- Principals tended to have more positive attitudes about the Program than did teachers, especially in Year 4. Of course, principals did not have to hand out tablets, supervise brushing, give health lessons, etc. However, the principals' attitudes would not have been so positive if they were getting many complaints from teachers and parents. The largest discrepancy between principal and teacher attitudes occurred at Billerica.
- Teachers in the lower grade levels had more positive attitudes about the Program than teachers in the upper grade levels. This was true in each survey year and accounted for almost all of the differences in average scores across years.

Table 3.1

SUMMARY BY GRADE LEVEL AND YEAR OF AVERAGE RESPONSE TO THE QUESTION: WHAT EFFECT HAS THE PROGRAM HAD ON YOUR NORMAL SCHOOL ACTIVITIES?

Year	Teachers in Grade						All Principals
	1	2	3	4	5	6	
1	2.1	2.1			2.4		2.1
2		2.2	2.3			2.5	1.9
4				2.5	2.6		2.1

Effect: 1 = very positive to 5 = very negative. The principals' average rating was statistically significantly more positive (alpha = .001) than the teachers' average rating in Years 2 and 4. Results do not include data from Regimen #6.

Table 3.2

SUMMARY BY SITE AND YEAR OF AVERAGE RESPONSE TO THE QUESTION: WHAT EFFECT HAS THE PROGRAM HAD ON YOUR NORMAL SCHOOL ACTIVITIES?

	Year 1		Year 2		Year 4		Average	
	Teach	Prin	Teach	Prin	Teach	Prin	Teach	Prin
Chattanooga	2.0	1.6	1.9	1.8	2.2	1.5	2.0	1.7
Billerica	2.9	1.7	2.7	1.5	2.5	1.8	2.7	1.7
New York	2.1	2.3	2.4	1.8	(a)	(a)	2.2	2.1
Minneapolis	2.2	2.4	2.3	1.8	2.7	2.4	2.4	2.3
Wichita	2.1	2.2	2.4	1.8	2.9	2.0	2.5	2.0
Pierce County	2.1	1.8	2.1	1.6	2.6	2.1	2.3	1.8
Hayward	2.3	2.2	2.5	2.5	2.6	2.4	2.5	2.4
El Paso	1.9	2.2	2.1	1.8	2.1	2.1	2.0	2.0
Monroe	2.2	2.4	2.6	2.5	2.4	2.8	2.4	2.6
Tallahassee	2.2	2.1	2.3	1.9	2.4	1.8	2.3	2.0
Average	2.1	2.1	2.3	1.9	2.5	2.1	2.3	2.0

[a]Site averages include data from schools with more than one regimen. New York was not in the Program in Year 4. An analysis of variance indicated that there were significant differences among sites in each survey year for both teachers and principals.

Table 3.3

SUMMARY BY REGIMEN AND YEAR OF AVERAGE RESPONSE TO THE QUESTION: WHAT EFFECT HAS THE PROGRAM HAD ON YOUR NORMAL SCHOOL ACTIVITIES?

	Year 1		Year 2		Year 4		Average	
Regimen	Teach	Prin	Teach	Prin	Teach	Prin	Teach	Prin
1	2.1	1.9	2.4	2.0	2.6	2.3	2.4	2.0
2	2.0	1.5	2.1	1.8	2.4	1.9	2.2	1.7
3	2.3	2.1	2.4	1.9	2.7	2.2	2.5	2.0
4	2.2	2.2	2.4	2.1	2.5	2.2	2.4	2.2
5	2.0	2.1	2.2	2.0	2.3	2.3	2.2	2.1
6	2.9	3.0	(a)	(a)	(a)	(a)	(a)	(a)

[a]Averages do not include data from respondents in schools with more than one regimen. Regimen 6 teachers and principals were not sent questionnaires in Years 2 and 4. With the exception of Regimen #6 in Year 1, none of the within year differences among regimens were statistically significant.

- There were systematic differences between sites across years. Chattanooga and El Paso teachers consistently had the most positive attitudes, whereas Billerica's teachers usually had the least positive attitudes.
- The regimen rated by teachers as having the most positive effect on normal school activities was #5 (dental health lessons and brushing) and the least was #3 (clinic only). However, all the regimens were rated as having a positive effect, and none of the differences in average scores among them were statistically significant. The one exception to these trends occurred in Year 1 where Regimen #6 (control) was rated as significantly less positive than the other five regimens.

Table 3.4 shows there was a moderate positive relationship between the number of problems reported by teachers and their evaluations of the Program's effect on normal school activities, especially in Years 2 and

Table 3.4

MEANS, STANDARD DEVIATIONS, AND CORRELATIONS BETWEEN THE NUMBER OF PROBLEMS REPORTED BY TEACHERS AND THEIR EVALUATION OF THE PROGRAM'S EFFECT ON SCHOOL ACTIVITIES

Year	Number of Problems		Program's Effect		Correlation Between Effects and Problems
	Mean	SD	Mean	SD	
1	0.9	1.3	2.2	.84	.20
2	1.7	2.0	2.3	.81	.48
4	1.7	1.8	2.5	.85	.47

4. The large increase in the average number of problems reported after Year 1 was attributable to adding two items to the Year 2 and 4 questionnaires (see Sec. II). The mean number of problems reported was positively correlated with grade level in Year 2 but not in Year 4 (see Table E.3).

The analyses summarized in Table 3.5 indicated that having had experience with the Program generally was not related to the number of problems teachers reported or their attitudes toward the Program. The only statistically significant exception to this trend was in Year 4 where the grade 5 teachers who had been in the Program before Year 4 had slightly more positive attitudes than the grade 5 teachers with no previous experience.

ATTITUDES TOWARD CONTINUING THE PROGRAM

The Year 1 questionnaire asked the teachers whether they would like to see the Program continued if funds were available. As can be seen from Table 3.6, about 10 percent of the teachers said "no" and another 9 percent were "not sure." The grade 5 teachers were slightly more opposed to the Program than were the grade 1 or 2 teachers. About 25 percent of the teachers wanted the Program expanded, except in Regimen 3 (clinic only) where 56 percent wanted it expanded. An analysis of the write-in responses indicated that most of the teachers who wanted the

Table 3.5

RELATIONSHIP OF PREVIOUS PROGRAM EXPERIENCE TO NUMBER OF PROBLEMS REPORTED AND ATTITUDE ABOUT PROGRAM'S EFFECT ON NORMAL SCHOOL ACTIVITIES

Year[a]	Number of Teachers	Previous Experience[a]	Average Score: Number of Problems	Average Score: Program's Effect
2	94	No	1.39	2.20
2	120	Yes	1.29	2.13
4	116	No	1.69	2.68
4	86	Yes	1.70	2.39

[a]The Year 2 results were based on Grade 2 teachers and the Year 4 results on Grade 5 teachers. Previous experience in Year 2 refers to a teacher having participated in Year 1. Previous experience in Year 4 refers to a teacher having participated in Year 1, 2, or 3.

Table 3.6

PERCENTAGE OF YEAR 1 TEACHERS MAKING EACH RESPONSE TO THE QUESTION: IF FUNDS WERE AVAILABLE, WOULD YOU LIKE TO SEE THE PROGRAM CONTINUED?

Response Category	Regimen Number 1	2	3	4	5	Average
No	11	10	5	16	8	10
Not Sure	6	8	8	14	9	9
Yes, But Reduced	20	13	1	9	16	12
Yes As Is	45	40	30	37	39	38
Yes, But Expanded	19	29	56	22	28	31

Program expanded wanted this expansion to be in the form of restorative care. Sites that tended to have the most positive attitudes about the Program's effect on normal school activities also tended to be the ones that were most strongly in favor of continuing the Program (see Table 3.2).

The Year 2 and 4 questionnaires asked teachers about continuing each Program component. The data in Tables 3.7 and 3.8 indicate that slightly more than 50 percent of the teachers wanted the components continued. All sites showed less interest in continuing the dental health lessons in Year 4 than in Year 2. All but one site showed more interest in continuing the Clinic in Year 4 than in Year 2. There wer no significant systematic effects due to regimen.

CHILDREN'S RECEPTIVITY TO EACH PROGRAM COMPONENT

The third attitude question asked teachers about how receptive their students were to each component. Table 3.9 indicates that teachers generally thought their students were moderately receptive tc the components. Analyses parallel to those depicted in Table 3.1 indicated that differences in scores among years were probably due to the grade levels surveyed rather than experience with the Program. Differences among sites were generally consistent with the results in Table 3.8. No data were available to assess whether teachers' impressions of receptivity were indicative of their students' actual attitudes regarding the components.

Table 3.7

PERCENTAGE OF TEACHERS WHO REPORTED THEY WOULD LIKE TO SEE THE COMPONENT CONTINUED IF FUNDS WERE AVAILABLE

Component	Year 2 Grades 2+3	Year 4 Grades 4+5	Year 2 Grade 6
Brushing	55	48	55
Mouthrinse	51	50	52
Tablets	58	56	55
Health Lessons	74	56	58
Clinic	54	66	56
Average	58	55	55

Table 3.8

PERCENTAGE OF TEACHERS BY SITE AND YEAR WHO SAID THAT IF FUNDS WERE AVAILABLE, THEY WOULD LIKE TO SEE THE PROGRAM'S COMPONENTS CONTINUED

	Brushing		Mouth-rinse		Tablets		Health Lessons		Clinic	
Site/Year[a]	2	4	2	4	2	4	2	4	2	4
Chattanooga	61	39	49	46	--	--	67	58	48	73
Billerica	32	60	40	50	62	75	60	50	60	81
New York	73	--	67	--	--	--	70	--	61	--
Minneapolis	59	43	66	47	--	--	76	59	49	62
Wichita	40	38	35	25	43	34	66	50	49	47
Pierce County	72	60	42	48	48	50	66	54	52	72
Hayward	35	51	37	57	--	--	56	61	31	42
El Paso	67	38	71	48	--	--	80	76	63	38
Monroe	39	56	35	65	58	65	64	60	55	85
Tallahassee	73	49	68	69	77	69	82	54	87	90
Average	55	48	51	50	58	56	69	56	55	66

[a]The New York site was not in the Program after Year 3. Tablets were not offered at the fluoridated sites.

Table 3.9

AVERAGE SCORE AMONG TEACHERS TO THE QUESTION: HOW RECEPTIVE WERE THE CHILDREN TO EACH COMPONENT?

Component	Year 1	Year 2	Year 4
Brushing	1.3	1.5	1.7
Mouthrinse	1.7	1.8	1.9
Tablets	1.6	1.8	2.0
Health Lessons	1.5	1.5	1.7
Clinic	1.4	1.6	1.7
Examinations	1.4	1.5	1.6

Rating Scale: 1= very receptive, 2= mildly receptive, and 3= unreceptive

IV. DISCUSSION AND CONCLUSIONS

ADHERENCE TO PROTOCOL

The data in Sec. II indicate that most teachers knew the Program's schedule for administering the brushing, mouthrinse, and tablet components. When teachers were asked on what day(s) of the week they gave each of these components, almost all of the teachers listed the schedule called for in the Program's protocol.

The amount of mouthrinse used during School Years 2 and 3 was computed for the purposes of measuring treatment costs (Foch et al., 1984). A further analysis of these data indicated that after controlling for absenteeism (but not waste), about 87 percent of the fluoride mouthrinse that should have been used (if children rinsed weekly for each week it was reportedly offered) was actually consumed (see Table 4.1 and Bell et al., 1984).

The Program's findings of less than total compliance with a school-based fluoride mouthrinse protocol is consistent with the results reported by Eckhaus et al. (1982) in an elementary school rinse program in Livermore, California. In that study, "87 percent of the teachers offered the rinse at least 21 times out of a possible 32 treatments, but 13 percent failed to offer the rinse more than half of the scheduled rinse days, and only 35 percent of the teachers offered the rinse at least 29 times." As many as 23 percent of the Livermore teachers refused to have their classrooms participate in the program during its second year of operation.

Coombs et al. (1981, p. 794) found that in a national sample of 447 school districts that had a fluoride mouthrinse program,

> Three quarters were not designed in accordance with recommendations from health authorities concerning how best to implement the program. Many programs offered protection to children during only a few of their caries-prone years and/or gave incomplete protection during a given school year (the rinse was distributed for less than 9 months). In addition, since nearly one-half of the rinse program supervisors did not monitor the distribution of the fluoride rinse, these supervisors did not know if the children were receiving the rinse on a regular basis.

Table 4.1

PERCENTAGE OF FLUORIDE MOUTHRINSE AND TABLETS THAT WOULD HAVE BEEN USED IN THE PROGRAM IF ALL CHILDREN HAD RECEIVED THE AMOUNT CALLED FOR IN THE PROTOCOL

Site[a]	Mouthrinse	Tablet
Chattanooga	99	--
Billerica	88	89
New York	89	--
Minneapolis	77	--
Wichita	90	68
Pierce County	83	49
Hayward	93	--
El Paso	48	--
Monroe	83	58
Tallahassee	116	56
Average	87	64

[a]Chattanooga, New York, and Hayward had aides deliver the rinse. Tablets were provided only at nonfluoridated sites.

An analysis of fluoride tablet consumption in our Program revealed that the actual number of tablets used was only 64 percent of the amount that would have been consumed had the teachers adhered to the Program's protocol. An in-depth analysis of tablet usage at one site suggested that average compliance rates may be a function of high rates at some schools and low rates at other schools rather than a moderate rate at all schools.

It was not possible to carry out a supplies usage analysis for the brushing and health lessons components. However, observations made during the site visits and teacher comments suggested that they too were probably not always given as planned.

Taken together, the site visit, questionnaire response, and supplies usage data suggest that although teachers were aware of how and when the components were supposed to be offered, they did not always

follow the prescribed protocol. Although this finding is consistent with the results of other studies, compliance in the Program was as at least as high if not higher than that observed in other school based dental health programs.

TIME REQUIREMENTS

Questionnaire responses and site visit observations suggested that the amount of time required to deliver the preventive procedures was greater than expected at the beginning of the Program. Moreover, there were very large and systematic variations among sites in the amount of time their teachers said it took to administer the brushing and mouthrinse components. The average amount of time required per week for each procedure was: 6 to 11 minutes for mouthrinse, 20 to 25 minutes for tablets, and 16 to 30 minutes for brushing and flossing. In general, the amount of time required decreased with grade level. There was no sign that experience with the procedures on the part of either students or teachers reduced the time required to deliver these procedures.

TEACHER ATTITUDES

The amount of time required to deliver the classroom components was the main source of teacher and principal complaints about the Program. And, even though teachers at the upper elementary grade levels reported spending less time in delivering the components than teachers at the lower grade levels, the grade 4 to 6 teachers were more concerned about the amount of class time taken up by the procedures than were grade 1 to 3 teachers.

This difference in level of concern about the time requirements was probably a major factor in the grade 1 to 3 teachers being generally more enthusiastic about continuing the Program than the grade 4 to 6 teachers. The difference between lower and upper elementary school teachers in their attitudes toward the Program was not related to how many years they had participated in it. However, by the end of the Program, teachers at all grade levels were more in favor of continuing the clinic rather than the classroom procedures.

STUDENT RECEPTIVITY

The decrease in teacher enthusiasm for the classroom procedures with each increase in grade level also was reflected in the teachers' perceptions of their students' receptivity to the Program's preventive procedures. Results obtained in other studies suggest this trend continues on into junior and senior high school. For instance, Eckhaus (1979) found that the rate of parental consents for children to enroll in a mouthrinse program declined from 79 percent at the elementary level to 67 percent in grade 8 and about 30 percent in high school. DePaola, Soparkar, and Jauron (1980) found that the consent rates for a fluoride mouthrinse program in Massachusetts were between 84 and 94 percent at the elementary level, 73 percent in the middle schools, and 44 percent in high school.

The decline in parental consent rate with grade level probably reflects student attitudes because students are the ones who usually return the consent forms to the schools and therefore they may exert "pocket vetos" in addition to putting pressure on their parents to not give consent.

IMPLICATIONS

Two important conclusions may be drawn from the foregoing findings. First, although there was less than 100 percent compliance with the Program's protocols for the classroom components, the amount of compliance that was obtained was as at least as high as that which probably occurs in most operational school-based preventive dental care programs. Thus, our failure to find a substantial reduction in decay with these procedures (Bell et al., 1984) is probably an accurate reflection of their current effectiveness under realistic field conditions rather than an artifact of how they were implemented.

The second important implication of our findings is that studies that attempt to measure the effectiveness of fluoride mouthrinse and other classroom procedures under realistic field conditions should probably focus on elementary school children, especially those in the lower grade levels. Although the amount of dental decay that might be prevented is greater at the upper grade levels, it is unlikely that

there will be sufficiently widespread teacher and student support for such programs beyond the elementary school level. Clinic procedures (and particularly sealants) may therefore be an attractive alternative, especially because they are also far more effective in preventing decay.

Appendix A

TEACHER QUESTIONNAIRES AND COVER LETTERS

Rand
SANTA MONICA, CA

April 21, 1978

Dear Teacher:

As you may know, The Rand Corporation is conducting an independent evaluation of the National Preventive Dentistry Program. In order to aid this evaluation, we wish to gather information from principals, teachers, and nurses at every program school. This information includes the identification of both time and monetary expenditures made as a result of the program, as well as the degree of compliance by schools, classrooms and individuals toward project protocol.

We would appreciate your completing the enclosed questionnaire and returning it in the pre-addressed envelope. We would also welcome any comments you may have about the program.

Your name will not appear in any reports resulting from this questionnaire. Information from the questionnaire will be used solely for analyzing the results of the program and will be kept strictly confidential (except as may be required by law).

Thank you very much for your time and cooperation.

Sincerely,

Frank H. Leone

Frank H. Leone
Data Collection Supervisor
National Preventive Dentistry
Program

FHL/df

Enclosure

THE RAND CORPORATION, 1700 MAIN STREET, P.O. BOX 2138, SANTA MONICA, CALIFORNIA 90406-2138, PHONE: (213) 393-0411

SDP # ☐☐☐☐ 1-6/ -1- Document 5 6 7-8/

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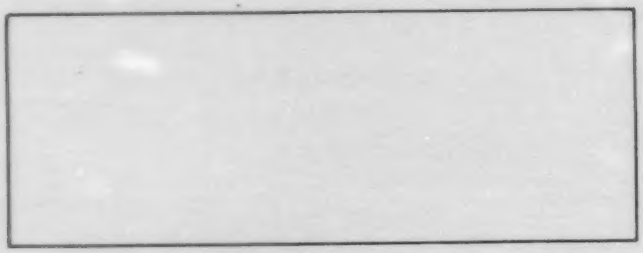
TEACHER QUESTIONNAIRE

Preventive Dentistry Demonstration Program



9-16/

Grade(s) currently teaching _____ ☐☐ 17-18/ (Office use)

Completion Date ☐☐ / ☐☐ / ☐☐ 19-24/ Mo Day Yr

1. About how many *minutes per week* of class time do your students *normally* spend on each of the following activities:

	MINUTES PER WEEK	
a. brushing	☐☐☐	25-27/
b. flossing	☐☐☐	28-30/
c. fluoride mouthrinse	☐☐☐	31-33/
d. flouride tablet	☐☐☐	34-36/

2. About how many *hours*, if any, have you spent so far this school year in each of the following activities associated with the program?

	HOURS	
a. obtaining parental consent for student participation in the program	☐☐	37-38/
b. in-service training	☐☐	39-40/
c. dealing with parents after consent is given	☐☐	41-42/
d. preparation of dental health lessons and activities	☐☐	43-44/
e. using classtime for dental health lessons and activities	☐☐	45-46/

3. What effect, if any, has the Preventive Dentistry Program had on your normal school activities?

- ☐ very positive
- ☐ positive
- ☐ neutral, no effect 47/
- ☐ negative
- ☐ very negative

4. **If your school had the opportunity, would you like to see the preventive dental care program continued after the completion of this project?**

(Office-use only)

- ☐ yes, but expanded to include _____ ☐ 48/
  _____ 51/
- ☐ yes, just as it is (Office use only)
- ☐ yes, but reduce it by _____ ☐☐ 49-50/
  _____
- ☐ no
- ☐ don't know/not sure

5. **Which of the following factors, *if any*, do you believe presented or presents a problem in conducting this project at your school?**

CHECK ALL THAT APPLY

- ☐ Professional dental treatment (e.g., sealants, cleaning of teeth) 52/
- ☐ Fluoride mouthrinse program 53/
- ☐ Fluoride tablet program 54/
- ☐ Brushing program 55/
- ☐ Dental health education 56/
- ☐ School administration 57/
- ☐ Teachers' association(s) 58/
- ☐ School district staff 59/
- ☐ The project's local sponsoring agency or staff 60/
- ☐ Parents 61/
- ☐ Local dental societies 62/
- ☐ The community in general 63/
- ☐ Lower grade student (gr. 1-3) 64/
- ☐ Upper grade students (gr. 4-6) 65/
- ☐ Record keeping 66/
- ☐ Equipment 67/
- ☐ Supplies 68/
- ☐ Facilities 69/
- ☐ Dental examination process 70/
- ☐ Other 71/

  Specify: _____

  _____

  _____

CARD 2 6/

-3-

6. In general, have the children in your class been very receptive, mildly receptive or unreceptive toward:

(PLEASE CIRCLE ONE FOR EVERY ACTIVITY)

	VERY RECEPTIVE	MILDLY RECEPTIVE	UN-RECEPTIVE	DOES NOT APPLY	
1. Visual dental examinations	1	2	3	4	7/
2. Radiographs (x-ray examinations)	1	2	3	4	8/
3. Fluoride mouthrinse	1	2	3	4	9/
4. Fluoride tablets	1	2	3	4	10/
5. Brushing	1	2	3	4	11/
6. Flossing	1	2	3	4	12/
7. Disclosing solution	1	2	3	4	13/
8. Educational materials	1	2	3	4	14/
9. Educational films	1	2	3	4	15/
10. Professional dental treatment at school	1	2	3	4	16/

7. What do you consider to be the primary strengths of the Preventive Dentistry Program?

(Office use only)

_____ ☐☐ 17-18/

_____ ☐☐ 19-20/

_____ ☐☐ 21-22/

_____ ☐☐ 23-24/

_____

8. What do you consider to be the primary weaknesses of the Preventive Dentistry Program or what are the ways in which it should be improved?

(Office use only)

_____ ☐☐ 25-26/

_____ ☐☐ 27-28/

_____ ☐☐ 29-30/

_____ ☐☐ 31-32/

_____ ☐☐ 33-34/

9. What day or days do you normally provide the following program components to the children in your class:

(CHECK ALL THAT APPLY)

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	NO USUAL SCHEDULE
Brushing	☐ 35/	☐ 36/	☐ 37/	☐ 38/	☐ 39/	☐ 40/
Fluoride mouthrinse	☐ 41/	☐ 42/	☐ 43/	☐ 44/	☐ 45/	☐ 46/
Fluoride tablet	☐ 47/	☐ 48/	☐ 49/	☐ 50/	☐ 51/	☐ 52/
Dental health education	☐ 53/	☐ 54/	☐ 55/	☐ 56/	☐ 57/	☐ 58/

10. Please list the names of any children in your class that are enrolled in the program but are *no longer* receiving one or more of the classroom treatment components listed below:

CARD 3 6/

(CHECK ALL THAT APPLY)

Child's name	Brushing	Mouthrinse	Tablet	(Office use only)
_____	☐ 7/	☐ 8/	☐ 9/	☐☐☐☐☐☐☐☐ 10-17/
_____	☐ 18/	☐ 19/	☐ 20/	☐☐☐☐☐☐☐☐ 21-28/
_____	☐ 29/	☐ 30/	☐ 31/	☐☐☐☐☐☐☐☐ 32/39/
_____	☐ 40/	☐ 41/	☐ 42/	☐☐☐☐☐☐☐☐ 43-50/
_____	☐ 51/	☐ 52/	☐ 53/	☐☐☐☐☐☐☐☐ 54-61/

Rand
SANTA MONICA, CA

April 1979

Dear Teacher:

The Rand Corporation is conducting an independent evaluation of the National Preventive Dentistry Program that is underway at your school. In order to aid this evaluation, we wish to gather information from teachers at every program school in order to assess the degree of compliance by schools, classrooms, and individuals toward project protocol.

We would appreciate your completing the enclosed questionnaire and returning it in the pre-addressed envelope. We would also welcome any comments you may have about the program.

Your name will not appear in any reports resulting from this questionnaire. Information from the questionnaire will be used solely for analyzing the results of the program and will be kept strictly confidential (except as may be required by law).

The response by teachers to last year's questionnaire was gratifying and the information gathered very useful.

Thank you for your time and cooperation.

Sincerely,

Frank H. Leone
Data Collection Supervisor
National Preventive
Dentistry Program

FHL:ess
Enclosure

THE RAND CORPORATION, 1700 MAIN STREET, P.O. BOX 2138, SANTA MONICA, CALIFORNIA 90406-2138, PHONE: (213) 393-0411

-1- Document 6 6 1-2/

TEACHER QUESTIONNAIRE
Preventive Dentistry Demonstration Program
Year 2

CARD 1 7/

3-6/ 8-15/

1. **About how many** *minutes per session* **do you and your students** *normally* **spend on each of the following activities:** *(Enter 0 for any activities that are not done in your classroom). Count the time from when you first start the activity until it is completed and all materials are put away.*

	MINUTES PER SESSION	
brushing	☐☐	16-17/
flossing	☐☐	18-19/
fluoride mouthrinse	☐☐	20-21/
fluoride tablet	☐☐	22-23/
preparation of a typical dental health lesson	☐☐☐	24-26/
presentation of a typical dental health lesson	☐☐☐	27-29/

2. **Which of the following factors,** *if any,* **do you believe presented or presents a problem in conducting this program at your school?**

CHECK ALL THAT APPLY

- ☐ Clinical dental treatment (e.g., sealants, cleaning of teeth) 30/
- ☐ Fluoride mouthrinse program 31/
- ☐ Fluoride tablet program 32/
- ☐ Brushing program 33/
- ☐ Quality/organization of health education materials 34/
- ☐ Amount of classroom time required 35/
- ☐ Inconveniences caused by having the program 36/
- ☐ Interaction with parents 37/
- ☐ Interaction with local program staff 38/
- ☐ Record keeping 39/
- ☐ Equipment 40/
- ☐ Supplies 41/
- ☐ Facilities 42/
- ☐ Annual dental examinations 43/
- ☐ Receptiveness of children to the program's brushing, flossing, or mouthrinse activities 44/
- ☐ Receptiveness of children to the program's educational materials 45/
- ☐ Receptiveness of children to clinical treatment 46/
- ☐ Other 47/
  Please Specify: _____

_____

_____ ☐☐ 48-49/

3. In general, have the children in your class been very receptive, mildly receptive or unreceptive toward:

(PLEASE CIRCLE ONE CODE FOR EVERY ACTIVITY)

	VERY RECEPTIVE	MILDLY RECEPTIVE	UN-RECEPTIVE	DOES NOT APPLY	
Dental examinations	1	2	3	4	50/
Fluoride mouthrinse	1	2	3	4	51/
Fluoride tablets	1	2	3	4	52/
Brushing	1	2	3	4	53/
Flossing	1	2	3	4	54/
Disclosing solution	1	2	3	4	55/
Educational materials	1	2	3	4	56/
Educational films	1	2	3	4	57/
Clinical treatment at school	1	2	3	4	58/

4. On which day or days are the following program components normally provided to the children in your class?

CARD 2 7/

(CHECK ALL THAT APPLY)

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	NO USUAL SCHEDULE	NOT PROVIDED TO MY STUDENTS
Brushing	☐ 8/	☐ 9/	☐ 10/	☐ 11/	☐ 12/	☐ 13/	☐ 14/
Fluoride mouthrinse	☐ 15/	☐ 16/	☐ 17/	☐ 18/	☐ 19/	☐ 20/	☐ 21/
Fluoride tablet	☐ 22/	☐ 23/	☐ 24/	☐ 25/	☐ 26/	☐ 27/	☐ 28/
Dental health education	☐ 29/	☐ 30/	☐ 31/	☐ 32/	☐ 33/	☐ 34/	☐ 35/

5. How do you *usually* present the dental health lessons provided by the Preventive Dentistry Program? 36/

CHECK ONE

☐ Each lesson is presented by itself in one or more classroom periods.

☐ Each lesson is usually combined with another instructional program (e.g., reading, science, etc.) rather than presented separately during a given classroom period.

☐ The dental health lessons are not presented, but some of the materials and activities in them are used to supplement the school's regular health curriculum.

☐ I usually use the lessons (and/or the materials in them) in some other way. Please describe: _____ ☐☐ 37-38/

_____ ☐☐ 39-40/

☐ I do not use the lessons because _____ ☐☐ 41-42/

_____ ☐☐ 43-44/

6. What kind of schedule do you use to present the dental health lessons?

CHECK ONE 45/

- ☐ I present them all within a few weeks.
- ☐ I present them all within a few months.
- ☐ I spread them out over the school year.
- ☐ I do not use them.

7. How would you evaluate the overall quality of the dental health lessons compared to other curriculum materials used in your school?

- ☐ Much better than average 46/
- ☐ Better than average
- ☐ Average
- ☐ Below average
- ☐ Well below average

8. If funds were available, what components of the program would you like to see continued after the 1979-80 school year? (Please check all that apply):

- ☐ Dental health lessons (materials, films, and lesson plans) 47/
- ☐ Brushing 48/
- ☐ Flossing 49/
- ☐ In-school dental clinic 50/
- ☐ Fluoride mouthrinse 51/
- ☐ Fluoride tablets 52/

9. About how many hours, if any, have you spent so far this year receiving in-service training for the Preventive Dentistry Program?

HOURS

☐☐ 53-54/

10. **What effect, if any, has the Preventive Dentistry Program had on your normal school activities?** 55/

- ☐ very positive
- ☐ positive
- ☐ neutral, no effect
- ☐ negative
- ☐ very negative

11. **We invite you to express your feelings about the Preventive Dentistry Program, including any changes that might be considered for the future.**

_____ ☐☐ 56-57/

_____ ☐☐ 58-59/

_____ ☐☐ 60-61/

_____ ☐☐ 62-63/

_____ ☐☐ 64-65/

_____ ☐☐ 66-67/

_____ ☐☐ 68-69/

_____ ☐☐ 70-71/

_____

THANK YOU

Rand
SANTA MONICA, CA

April 1981

Dear Teacher:

As you may know, the Rand Corporation is conducting an independent evaluation of the National Preventive Dentistry Demonstration Program. As a teacher participating in the program, your opinions and experiences with the program are of particular interest to us.

The response from teachers during prior school years has been outstanding. Since this is the last year we are contacting teachers, we hope to equal or surpass previous levels of response. We would appreciate your completing the enclosed questionnaire and returning it in the self-addressed envelope.

Your name will not appear in any reports resulting from this questionnaire. Information from the questionnaire will be used solely for analyzing the results of the program and will be kept strictly confidential (except as may be required by law).

Thank you very much for your time and cooperation.

Sincerely,

Frank H. Leone
Data Collection Supervisor
Preventive Dentistry Demonstration Project

FHL/dlk

Enclosures

THE RAND CORPORATION, 1700 MAIN STREET, P.O. BOX 2138, SANTA MONICA, CALIFORNIA 90406-2138, PHONE: (213) 393-0411

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-1-

Document 7 6 1-2/

TEACHER QUESTIONNAIRE

Preventive Dentistry Demonstration Prog am

Year 4

3-6/

CARD 1 7/ 8-15/

1. What is the primary grade that you have taught during the 1980-81 school year?

_____ 16-17/

2. Did you administer components of the National Preventive Dentistry Demonstration Program to your classroom during *(check all that apply)*:

- ☐ the 1977-78 school year? 18/
- ☐ the 1978-79 school year? 19/
- ☐ the 1979-80 school year? 20/

3. About how many *minutes per session* do you and your students *normally* spend on each of the following activities: *(Enter 0 for any activities that are not done in your classroom). Count the time from when you first start the activity until it is completed and all materials are put away.*

	MINUTES PER SESSION	
brushing	☐☐	21-22/
flossing	☐☐	23-24/
fluoride mouthrinse	☐☐	25-26/
fluoride tablet	☐☐	27-28/
preparation of a typical dental health lesson	☐☐☐	29-31/
presentation of a typical dental health lesson	☐☐☐	32-34/

4. About how many hours, if any, have you spent so far this year receiving in-service training for the Preventive Dentistry Program?

HOURS ☐☐ 35-36/

5. How do you *usually* present the dental health lessons provided by the Preventive Dentistry Program?

CHECK ONE 37/

- ☐ Each lesson is presented by itself in one or more classroom periods.
- ☐ Each lesson is usually combined with another instructional program (e.g., reading, science, etc.) rather than presented separately during a given classroom period.
- ☐ The dental health lessons are not presented, but some of the materials and activities in them are used to supplement the school's regular health curriculum.
- ☐ I usually use the lessons (and/or the materials in them) in some other way. Please describe. _____ ☐☐ 38-39/

  _____ ☐☐ 40-41/
- ☐ I do not use the lessons because _____ ☐☐ 42-43/

  _____ ☐☐ 44-45/

6. What kind of schedule do you use to present the dental health lessons?

CHECK ONE

- ☐ I present them all within a few weeks.
- ☐ I present them all within a few months.
- ☐ I spread them out over the school year. 46/
- ☐ I do not use them.

7. In using the dental health education lessons, did you feel you had enough technical support

	YES	NO	
from the materials provided?	___	___	47/
in the in-service training?	___	___	48/
from the local staff?	___	___	49/
from available references?	___	___	50/

8. How would you evaluate the overall quality of the dental health lessons compared to other curriculum materials used in your school?

- ☐ Much better than average
- ☐ Better than average
- ☐ Average 51/
- ☐ Below average
- ☐ Well below average

9. In general, have the children in your class been very receptive, mildly receptive or unreceptive toward:

(PLEASE CIRCLE ONE CODE FOR EVERY ACTIVITY)

	Very Receptive	Mildly Receptive	Unreceptive	Does Not Apply	
Dental examinations	1	2	3	4	52/
Fluoride mouthrinse	1	2	3	4	53/
Fluoride tablets	1	2	3	4	54/
Brushing	1	2	3	4	55/
Flossing	1	2	3	4	56/
Disclosing solution	1	2	3	4	57/
Educational materials	1	2	3	4	58/
Educational films	1	2	3	4	59/
Clinical treatment at school	1	2	3	4	60/
				CARD 2	7/

10. If funds were available, what components of the program would you like to see continued after the 1980-81 school year? (Please check all that apply):

- ☐ Dental health lessons (materials, films, and lesson plans) 8/
- ☐ Brushing 9/
- ☐ Flossing 10/
- ☐ In-school dental clinic 11/
- ☐ Fluoride mouthrinse 12/
- ☐ Fluoride tablets 13/

11. In carrying out the program, how do you evaluate cooperation and support from the school administration?

- ☐ excellent 14/
- ☐ good
- ☐ fair
- ☐ poor
- ☐ absent

12. What effect, if any, has the Preventive Dentistry Program had on your normal school activities?

- ☐ very positive 15/
- ☐ positive
- ☐ neutral, no effect
- ☐ negative
- ☐ very negative

13. Which of the following factors, *if any*, do you believe presented or presents a problem in conducting this program at your school?

CHECK ALL THAT APPLY

- ☐ Clinical dental treatment (e.g., sealants, cleaning of teeth) *16/*
- ☐ Fluoride mouthrinse program *17/*
- ☐ Fluoride tablet program *18/*
- ☐ Brushing program *19/*
- ☐ Quality/organization of health education materials *20/*
- ☐ Amount of classroom time required *21/*
- ☐ Inconveniences caused by having the program *22/*
- ☐ Interaction with parents *23/*
- ☐ Interaction with local program staff *24/*
- ☐ Record Keeping *25/*
- ☐ Equipment *26/*
- ☐ Supplies *27/*
- ☐ Facilities *28/*
- ☐ Annual dental examinations *29/*
- ☐ Receptiveness of children to the program's brushing, flossing, or mouthrinse activities *30/*
- ☐ Receptiveness of children to the program's educational materials *31/*
- ☐ Receptiveness of children to clinical treatment *32/*
- ☐ Other (Please specify): *33/*

_____

_____

☐☐ *34-35/*

OPTIONAL

14. What advice would you offer to fellow teachers if a program similar to the National Preventive Dentistry Program were offered in their school district in the future?

_____

_____

_____

_____ ☐☐ *36-37/*

_____ ☐☐ *38-39/*

_____ ☐☐ *40-41/*

_____ ☐☐ *42-43/*

_____ ☐☐ *44-45/*

_____ ☐☐ *46-47/*

_____ ☐☐ *48-49/*

_____ ☐☐ *50-51/*

THANK YOU.

Appendix B

PRINCIPAL QUESTIONNAIRES AND COVER LETTERS

Rand
SANTA MONICA, CA

April 21, 1978

Dear Principal:

As you may know, The Rand Corporation is conducting an independent evaluation of the National Preventive Dentistry Program. In order to aid this evaluation, we wish to gather information from principals, teachers, and nurses at every program school. This information includes the identification of both time and monetary expenditures made as a result of the program, as well as the degree of compliance by schools, classrooms and individuals toward project protocol.

We would appreciate your completing the enclosed questionnaire and returning it in the pre-addressed envelope. We would also welcome any comments you may have about the program.

Your name will not appear in any reports resulting from this questionnaire. Information from the questionnaire will be used solely for analyzing the results of the program and will be kept strictly confidential (except as may be required by law).

Thank you very much for your time and cooperation.

Sincerely,

Frank H. Leone
Data Collection Supervisor
National Preventive Dentistry Program

FHL/df

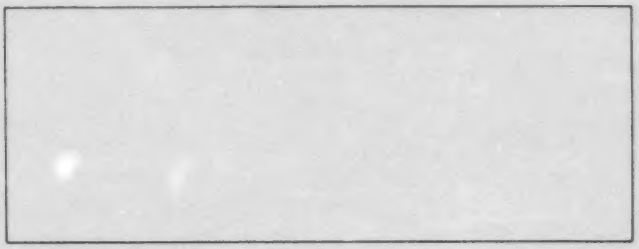
Enclosure

SDP # ☐☐☐☐☐ 1-5/ Document 5 5 7-8/

CARD 1 6/

PRINCIPAL QUESTIONNAIRE

Preventive Dentistry Demonstration Program



9-16/

Title _____ ☐ 17/

Completion Date ☐☐ / ☐☐ / ☐☐ 18-23/
Mo Day Yr

1. **Approximately how many hours did you devote to the project before dental examinations were conducted in your school?**

   Number of hours ☐☐☐ 24-26/

2. **Approximately how many hours have you devoted to the project since dental examinations were done in your school?**

   Number of hours ☐☐☐ 27-29/

3. **What effect, if any, has the Preventive Dentistry Program had on your normal school activities?**

   ☐ very positive
   ☐ positive
   ☐ neutral, no effect
   ☐ negative
   ☐ very negative

   30/

4. **If your school had the opportunity, would you like to see the preventive dental care program continued after the completion of this project?**

   ☐ yes, but expanded to include _____
   ☐ yes, just as it is
   ☐ yes, but reduce it by _____
   ☐ no
   ☐ don't know/not sure

   31/

5. Which of the following factors, if any, presented or presents a problem in conducting this project at your school?

CHECK ALL THAT APPLY

- ☐ Professional dental treatments (e.g., sealants, cleaning of teeth) 32/
- ☐ Fluoride mouthrinse program 33/
- ☐ Fluoride tablet program 34/
- ☐ Brushing program 35/
- ☐ Dental health program 36/
- ☐ School Administration 37/
- ☐ Teachers' association(s) 38/
- ☐ School district staff 39/
- ☐ The project's sponsoring agency or staff 40/
- ☐ Parents 41/
- ☐ Local dental societies 42/
- ☐ The community in general 43/
- ☐ Lower grade students (gr. 1-3) 44/
- ☐ Upper grade students (gr. 4-6) 45/
- ☐ Record keeping 46/
- ☐ Equipment 47/
- ☐ Supplies 48/
- ☐ Facilities 49/
- ☐ Dental examination process 50/
- ☐ Other 51/

  Specify: _____

  _____

  _____

6. Has your school diverted any non-teaching staff and/or volunteers from regular school programs to activities associated with the Preventive Dentistry Program?

☐ yes (please explain)

_____ 52/

_____

_____

☐ no

☐ don't know

7. Has the Preventive Dentistry Program created any problems in the use of school space, equipment and/or staff?

☐ yes (please explain) 53/

_____

_____

_____

☐ no

☐ don't know

8. Has your school made any expenditures (e.g., supplies, equipment, utilities and space) as a direct result of the Preventive Dentistry Program?

☐ yes (please explain) 54/

_____

_____

_____

☐ no

☐ don't know

Rand
SANTA MONICA, CA

April 1979

Dear Principal:

The Rand Corporation is conducting an independent evaluation of the National Preventive Dentistry Program that is underway at your school. In order to aid this evaluation, we wish to gather information from principals and teachers at every program school that might assess the degree of compliance by schools, classrooms and individuals toward project protocol.

We would appreciate your completing the enclosed questionnaire and returning it in the pre-addressed envelope. We would also welcome any comments you may have about the program.

Your name will not appear in any reports resulting from this questionnaire. Information from the questionnaire will be used solely for analyzing the results of the program and will be kept strictly confidential (except as may be required by law).

The response of principals last year to a similar questionnaire was quite gratifying and the information gathered very useful. This year's questionnaire will be particularly important in order to assess changes that have occurred during the program's second year.

Thank you for your time and cooperation.

Sincerely,

Frank H. Leone
Data Collection Supervisor
National Preventive Dentistry
Program

FHL:lmu
Enclosure

THE RAND CORPORATION, 1700 MAIN STREET, P.O. BOX 2138, SANTA MONICA, CALIFORNIA 90406-2138, PHONE: (213) 393-0411

[1] 1/ Document [6][5] 2-3/

PRINCIPAL QUESTIONNAIRE
Preventive Dentistry Demonstration Program
Year 2

4-12/

1. **Approximately how many hours have each of the following individuals devoted to the Preventive Dentistry Program during the current school year?**

	NUMBER OF HOURS	
Yourself	[ ][ ][ ]	13-15/
Your secretary	[ ][ ][ ]	16-18/
School custodians	[ ][ ][ ]	19-21/
School nurse	[ ][ ][ ]	22-24/

2. **What type of room does the project's clinical staff *normally* use in your school when they provide clinical treatment? (CHECK ONE).** 25/

- [ ] a. Cafeteria
- [ ] b. Library
- [ ] c. Gymnasium
- [ ] d. Multi-purpose area
- [ ] e. Classroom
- [ ] f. Other
  Please Specify: _____

3. **What is this room normally used for when the project is not providing clinical treatment at your school?**

_____
_____
_____ [ ][ ] 26-27/

4. What would this room be used for if the project was not being conducted at your school?

_____

_____

_____ ☐☐ 28-29/

5. If funds were available to continue the Preventive Dentistry Program in its current form after the 1979-80 school year, would you like to see it continued? 30/

☐ yes

☐ no

☐ don't know/not sure

6. What effect, if any, has the Preventive Dentistry Program had on your normal school activities? 31/

☐ very positive

☐ positive

☐ neutral, no effect

☐ negative

☐ very negative

7. We invite you to express your feelings about the Preventive Dentistry Program. Please include any changes that you might like to see implemented in the future.

_____

_____

_____

_____

_____

_____ ☐☐ 32-33/

_____ ☐☐ 34-35/

_____ ☐☐ 36-37/

_____ ☐☐ 38-39/

_____ ☐☐ 40-41/

_____ ☐☐ 42-43/

_____ ☐☐ 44-45/

_____ ☐☐ 46-47/

_____

THANK YOU

[2] 1/ Document [6][5] 2-3/

PRINCIPAL QUESTIONNAIRE
Preventive Dentistry Demonstration Program
Year 2

4-12/

1. Approximately how many hours have each of the following individuals devoted to the Preventive Dentistry Program during the current school year?

	NUMBER OF HOURS	
Yourself	[ ][ ][ ]	13-15/
Your secretary	[ ][ ][ ]	16-18/
School custodians	[ ][ ][ ]	19-21/
School nurse	[ ][ ][ ]	22-24/

2. If funds were available to continue the Preventive Dentistry Program in its current form after the 1979-80 school year, would you like to see it continued?

30/

- [ ] yes
- [ ] no
- [ ] don't know/not sure

3. What effect, if any, has the Preventive Dentistry Program had on your normal school activities?

31/

- [ ] very positive
- [ ] positive
- [ ] neutral, no effect
- [ ] negative
- [ ] very negative

4. We invite you to express your feelings about the Preventive Dentistry Program. Please include any changes that you might like to see implemented in the future.

_____

_____

_____

Rand
SANTA MONICA, CA

April 1981

Dear Principal:

As you may know, the Rand Corporation is conducting an independent evaluation of the National Preventive Dentistry Demonstration Program. As the Principal at one of the more than 199 schools participating in the program, your opinions and experiences are of particular interest to us.

We have received an overwhelming (93%) response from principals receiving questionnaires during previous school years. Since this is the last year we are collecting such information, we hope to do even better. Consequently, we would appreciate your completing the enclosed questionnaire and returning it in the self-addressed envelope.

Your name will not appear in any reports resulting from this questionnaire. Information from the questionnaire will be used solely for analyzing the results of the program and will be kept strictly confidential (except as may be required by law).

Thank you very much for your time and cooperation.

Sincerely,

Frank H. Leone
Data Collection Supervisor
National Preventive Dentistry Program

FHL/dlk

Enclosures

THE RAND CORPORATION, 1700 MAIN STREET, P.O. BOX 2138, SANTA MONICA, CALIFORNIA 90406-2138, PHONE: (213) 393-0411

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PRINCIPAL QUESTIONNAIRE

Preventive Dentistry Demonstration Program

Year 4

3-11/

1. How many years have you been the principal at this school?

   _____ years 12-13/

2. What effect, if any, has the Preventive Dentistry Program had on on normal school activities? 14/

   - ☐ very positive
   - ☐ positive
   - ☐ neutral, no effect
   - ☐ negative
   - ☐ very negative

3. Was the support to your school from the local project staff 15/

   - ☐ excellent
   - ☐ good
   - ☐ fair
   - ☐ poor

4. If your school had the opportunity, would you like to see the preventive dental care program continued after the completion of this project? 16/

   - ☐ yes, but expanded to include _____
   - ☐ yes, just as it is
   - ☐ yes, but reduce it by _____
   - ☐ no
   - ☐ don't know/not sure

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5. Which of the following factors, *if any*, do you believe presented or presents a problem in conducting this program at your school during the current school year?

CHECK ALL THAT APPLY

- ☐ Clinical dental treatment (e.g., sealants, cleaning of teeth) 17/
- ☐ Fluoride mouthrinse program 18/
- ☐ Fluoride tablet program 19/
- ☐ Brushing program 20/
- ☐ Quality/organization of health education materials 21/
- ☐ Amount of classroom time required 22/
- ☐ Inconveniences caused by having the program 23/
- ☐ Interaction with parents 24/
- ☐ Interaction with local program staff 25/
- ☐ Record Keeping 26/
- ☐ Equipment 27/
- ☐ Supplies 28/
- ☐ Facilities 29/
- ☐ Annual dental examinations 30/
- ☐ Receptiveness of children to the program's brushing, flossing, or mouthrinse activities 31/
- ☐ Receptiveness of children to the program's educational materials 32/
- ☐ Receptiveness of children to clinical treatment 33/
- ☐ Other (Please specify): 34/

_____

_____

☐☐ 35-36/

OPTIONAL

6. What advice would you offer to fellow principals if a project similar to the National Dentistry Demonstration Program were offered in their school district?

_____

_____

_____

_____

_____

_____ ☐☐ 37-38/

_____ ☐☐ 39-40/

_____ ☐☐ 41-42/

_____ ☐☐ 43-44/

_____ ☐☐ 45-46/

THANK YOU

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Appendix C

SCHEDULES AND METHODS FOR PRESENTING DENTAL HEALTH LESSONS BY SITE

Table C.1

SCHEDULES FOR PRESENTING DENTAL HEALTH LESSONS DURING YEAR 2 BY THE PERCENTAGE OF TEACHERS USING EACH SCHEDULE AT EACH SITE

Site	All Given Within a Few Weeks	All Given Within a Few Months	Spread Out over the School Year	Did Not Use Them	No Answer
Chattanooga	15	35	50	0	0
Billerica	6	26	40	16	12
New York	9	18	73	0	0
Minneapolis	20	18	55	4	3
Wichita	15	12	65	6	3
Pierce County	23	24	45	1	6
Hayward	9	24	51	13	4
El Paso	16	33	44	4	2
Monroe	17	6	69	8	0
Tallahassee	5	19	65	5	5
Average	13	21	56	6	4

The data in this and the other tables in this appendix are based on the teachers that had dental health lessons at their schools (regimens 1, 2, 4, or 5).

Table C.2

SCHEDULES FOR PRESENTING DENTAL HEALTH LESSONS DURING YEAR 4
BY THE PERCENTAGE OF TEACHERS USING EACH SCHEDULE AT EACH SITE

Site	All Given Within a Few Weeks	All Given Within a Few Months	Spread Out over the School Year	Did Not Use Them	No Answer
Chattanooga	12	6	76	3	3
Billerica	3	17	80	0	0
Minneapolis	18	18	51	12	0
Wichita	20	25	50	5	0
Pierce County	38	20	30	10	2
Hayward	11	8	62	16	3
El Paso	24	14	48	14	0
Monroe	36	0	60	4	0
Tallahassee	27	19	51	3	0
Average	21	14	56	7	1

Table C.3

METHODS OF PRESENTING DENTAL HEALTH LESSONS DURING YEAR 2
BY THE PERCENTAGE OF TEACHERS USING EACH METHOD AT EACH SITE

Site	Each Lesson Given by Itself	Lessons or Materials Used for Another Course	Materials Used to Supplement Regular Program	Lessons or Materials Used in Other Ways	Did not Use the Lessons and Materials	No Answer
Chattanooga	77	12	5	5	0	0
Billerica	67	1	2	4	12	14
New York	80	3	11	4	0	0
Minneapolis	76	7	3	7	4	3
Wichita	70	12	8	4	4	1
Pierce County	71	3	11	6	6	1
Hayward	60	5	13	8	13	2
El Paso	74	12	7	4	2	0
Monroe	61	11	14	6	8	0
Tallahassee	42	40	1	5	11	2
Average	68	11	8	5	6	2

Table C.4

METHODS OF PRESENTING DENTAL HEALTH LESSONS DURING YEAR 4
BY THE PERCENTAGE OF TEACHERS USING EACH METHOD AT EACH SITE

Site	Each Lesson Given by Itself	Lessons or Materials Used for Another Course	Materials Used to Supplement Regular Program	Lessons or Materials Used in Other Ways	Did Not Use the Lessons and Materials	No Answer
Chattanooga	48	27	24	0	0	0
Billerica	65	21	8	4	0	0
Minneapolis	64	16	6	1	12	0
Wichita	60	6	23	3	0	2
Pierce County	57	20	4	3	16	0
Hayward	44	22	20	0	14	0
El Paso	55	21	7	0	14	3
Monroe	46	34	14	2	4	0
Tallahassee	53	30	13	0	3	0
Average	55	22	13	1	7	1

Appendix D

NUMBER OF TIMES PER WEEK EACH COMPONENT PROVIDED

Table D.1

PERCENTAGE OF TEACHERS AT EACH SITE WHO REPORTED THAT THEIR CHILDREN BRUSHED ONE TO FIVE TIMES PER WEEK DURING YEAR 1

Site	Number of Teachers	Number of Times per Week					No Usual Schedule	Not Given
		1	2	3	4	5		
Chattanooga	32	0	88	0	0	0	6	6
Billerica	27	0	100	0	0	0	0	0
New York	31	10	70	0	0	3	15	2
Minneapolis	68	1	82	1	4	7	1	1
Wichita	60	2	97	0	0	2	0	0
Pierce County	54	0	19	9	7	63	2	0
Hayward	60	7	78	7	0	3	2	3
El Paso	42	2	88	5	2	0	0	2
Monroe	44	0	93	2	0	0	2	2
Tallahassee	52	0	98	0	0	0	2	0
Average	51	2	80	4	1	8	3	2

Responses tallied for teachers in Regimens 1, 2, 4, and 5 only.

Table D.2

PERCENTAGE OF TEACHERS AT EACH SITE WHO REPORTED THAT THEIR CHILDREN BRUSHED ONE TO FIVE TIMES PER WEEK DURING YEAR 2

Site	Number of Teachers	Number of Times per Week					No Usual Schedule	Not Given
		1	2	3	4	5		
Chattanooga	46	0	100	0	0	0	0	0
Billerica	31	0	100	0	0	0	0	0
New York	44	2	93	0	0	0	2	2
Minneapolis	71	0	94	3	0	1	0	1
Wichita	63	1	95	2	2	0	0	0
Pierce County	60	0	15	3	5	73	2	2
Hayward	55	4	85	5	0	2	0	4
El Paso	45	0	93	7	0	0	0	0
Monroe	36	3	94	0	3	0	0	0
Tallahassee	33	3	88	5	6	0	0	3
Average	48	1	85	2	2	7	1	1

Responses tallied for teachers in Regimens 1, 2, 4, and 5 only.

Table D.3

PERCENTAGE OF TEACHERS AT EACH SITE WHO REPORTED THAT THEIR CHILDREN RINSED ONE TO FIVE TIMES PER WEEK DURING YEAR 1

Site	Number of Teachers	Number of Times per Week					No Usual Schedule	Not Given
		1	2	3	4	5		
Chattanooga	32	88	0	0	0	0	6	6
Billerica	27	100	0	0	0	0	0	0
New York	31	74	10	3	0	0	3	10
Minneapolis	52	96	0	0	0	0	0	4
Wichita	46	100	0	0	0	0	0	0
Pierce County	42	100	0	0	0	0	0	0
Hayward	46	83	7	0	0	0	4	7
El Paso	32	94	3	0	0	0	0	3
Monroe	33	88	3	3	0	0	3	3
Tallahassee	39	97	0	0	0	0	3	0
Average	38	92	2	1	0	0	2	3

Responses tallied for teachers in Regimens 1, 2, and 4 only.

Table D.4

PERCENTAGE OF TEACHERS AT EACH SITE WHO REPORTED THAT THEIR CHILDREN RINSED ONE TO FIVE TIMES PER WEEK DURING YEAR 2

Site	Number of Teachers	Number of Times per Week					No Usual Schedule	Not Given
		1	2	3	4	5		
Chattanooga	37	100	0	0	0	0	0	0
Billerica	23	100	0	0	0	0	0	0
New York	30	97	0	0	0	0	0	3
Minneapolis	56	93	4	2	0	0	0	2
Wichita	54	94	0	0	0	0	0	6
Pierce County	52	100	0	0	0	0	0	0
Hayward	43	98	0	0	0	0	0	2
El Paso	35	100	0	0	0	0	0	0
Monroe	26	96	0	0	0	0	0	4
Tallahassee	47	96	0	2	0	0	0	2
Average	40	98	0	0	0	0	0	2

Responses tallied for teachers in Regimens 1, 2, and 4 only.

Table D.5

PERCENTAGE OF TEACHERS AT EACH SITE WHO REPORTED THAT THEIR CHILDREN RECEIVED TABLETS ONE TO FIVE TIMES PER WEEK DURING YEAR 1

Site	Number of Teachers	Number of Times per Week					No Usual Schedule	Not Given
		1	2	3	4	5		
Billerica	25	0	0	0	0	100	0	0
Wichita	45	0	0	0	2	98	0	0
Pierce County	41	0	0	0	5	95	0	0
Monroe	33	0	0	0	6	91	0	3
Tallahassee	37	0	0	0	5	95	0	0
Average	36	0	0	0	4	96	0	0

Responses tallied for teachers at nonfluoridated sites in Regimens 1, 2, and 4 only.

Table D.6

PERCENTAGE OF TEACHERS AT EACH SITE WHO REPORTED THAT THEIR CHILDREN RECEIVED TABLETS ONE TO FIVE TIMES PER WEEK DURING YEAR 2

Site	Number of Teachers	Number of Times per Week					No Usual Schedule	Not Given
		1	2	3	4	5		
Billerica	23	0	0	0	0	100	0	0
Wichita	52	0	0	0	10	83	2	6
Pierce County	51	2	0	4	6	86	0	2
Monroe	26	0	4	0	0	96	0	0
Tallahassee	46	0	0	0	2	96	2	0
Average	43	0	1	1	4	92	1	2

Responses tallied for teachers at nonfluoridated sites in Regimens 1, 2, and 4 only.

Appendix E

NUMBER AND PERCENTAGE OF PROBLEMS REPORTED

Table E.1

PERCENTAGE OF PRINCIPALS REPORTING VARIOUS PROBLEMS IN CONDUCTING THE PROGRAM IN SCHOOL YEARS 1 AND 4

Problem Areas	Year 1	Year 4
A. Internal Relationships		
1) Interaction with program staff	2	4
2) School administration	0	**
3) School district staff	1	**
B. External Relationships		
1) Interaction with parents	4	3
2) Teacher associations	2	**
3) Local dental societies	2	**
4) The community in general	0	**
C. General Procedures		
1) Amount of classroom time required	**	34
2) Inconveniences caused by the program	**	21
3) Recordkeeping	9	9
4) Facilities	23	18
5) Equipment	1	3
6) Supplies	8	4
7) Annual dental examinations	3	2
D. Specific Procedures		
1) Clinical dental treatment (CDT)	0	4
2) Receptiveness of children to CDT	**	2
3) Fluoride mouthrinse program	7	13
4) Fluoride tablet program	4	9
5) Brushing program	10	15
6) Receptiveness of children to brushing, mouthrinse, and tablet activities	**	5
7) Quality/organization of health education materials	4	1
8) Receptiveness of children to the health education materials	**	1

Responses tallied for all elementary school principals with the exception that the percentages in Section D for a component were based on just the principals who had that component at their school.

The symbol ** denotes instances in which a question was not asked. Questions about problem areas were not asked on the Year 2 principal questionnaire.

Table E.2

PERCENTAGE OF TEACHERS REPORTING VARIOUS PROBLEMS
IN CONDUCTING THE PROGRAM IN SCHOOL YEARS 1, 2, AND 4

Problem Areas	Year 1	Year 2	Year 4
A. Internal Relationships			
1) Interaction with program staff	2	2	2
2) School administration	0	**	**
3) School district staff	1	**	**
B. External Relationships			
1) Interaction with parents	9	3	3
2) Teacher associations	1	**	**
3) Local dental societies	2	**	**
4) The community in general	0	**	**
C. General Procedures			
1) Amount of classroom time required	**	32	45
2) Inconveniences caused by the program	**	24	28
3) Recordkeeping	15	22	17
4) Facilities	14	12	9
5) Equipment	6	4	4
6) Supplies	10	9	8
7) Annual dental examinations	3	3	2
D. Specific Procedures			
1) Clinical dental treatment (CDT)	9	16	6
2) Receptiveness of children to CDT	**	7	4
3) Fluoride mouthrinse program	11	9	13
4) Fluoride tablet program	10	9	12
5) Brushing program	15	15	14
6) Receptiveness of children to brushing, mouthrinse, and tablet activities	**	14	14
7) Quality/organization of health education materials	7	7	3
8) Receptiveness of children to the health education materials	**	5	4

Responses are tallied for all teachers with the exception that the percentages in Section D for a given component were based on the sample of teachers that had that component at their school. Thus, Year 4 data are for teachers in grades 4 and 5 only because by Year 4, 8th grade children were no longer receiving any of the classroom components.

The symbol ** denotes instances in which a question was not asked in a particular year. Write-in responses on the Year 1 questionnaires and observations made during Year 1's site visits led to adding problems areas on the Year 2 and 4 questionnaires.

Table E.3

AVERAGE NUMBER OF PROBLEMS REPORTED PER TEACHER
BY SITE, YEAR, AND GRADE LEVEL FOR SCHOOL YEARS 2 AND 4

	Year 2				Year 4		
Site	Grd 1	Grd 2	Grd 5	Mean	Grd 4	Grd 5	Mean
Chattanooga	1.65	1.06	1.88	1.53	1.00	1.50	1.25
Billerica	1.78	1.24	2.53	1.85	1.00	1.30	1.15
New York	.94	2.62	1.31	1.62	(a)	(a)	(a)
Minneapolis	1.13	1.06	1.83	1.34	1.66	2.37	2.01
Wichita	1.89	1.55	2.48	1.97	2.54	2.04	2.29
Pierce County	.86	.96	1.26	1.03	1.59	2.13	1.85
Hayward	1.40	2.72	2.67	2.26	1.35	1.65	1.50
El Paso	.63	1.71	1.17	1.17	1.47	1.36	1.41
Monroe	2.06	3.06	2.44	2.52	1.88	1.36	1.62
Tallahassee	1.17	1.56	2.39	1.71	2.32	.81	1.57
Average	1.35	1.75	2.00	1.70	1.65	1.61	1.63

[a]The New York site was discontinued after Year 3.

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